



THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

Room 261 ,Ziskind Building  
on Wednesday, Dec 30, 2015  
at 11:00

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Real Galois cohomology of semisimple groups

Abstract:

In a 2-page note of 1969, Victor Kac described automorphisms of finite order of simple Lie algebras over the field of complex numbers  $\mathbb{C}$ . He used certain diagrams that were later called Kac diagrams. In this talk, based on a joint work with Dmitry Timashev, I will explain the method of Kac diagrams for calculating the Galois cohomology set  $H^1(R, G)$  for a connected semisimple algebraic group  $G$  over the field of real numbers  $R$ . I will use real forms of groups of type  $E_7$  as examples. No prior knowledge of Galois cohomology, Kac diagrams, or groups of type  $E_7$  will be assumed.